KIPS | ENTRY TESTS PREPARATION

CHEMISTRY NMDCAT

UHS TOPIC WISE TEST (UNIT–10)

TOPICS

✓ **ALDEHYDES AND KETONES**

Q.1 The reaction in which aldehydes and ketones react with ammonia derivatives in the presence of acid catalyst followed by elimination of water is called

a. Redox reaction | b. Condensation reaction
c. Oxidation reaction | d. Polymerization reaction

Q.2 Which of the following ketone will not give iodoform test

a. Methyl isopropyl ketone | b. Dimethyl ketone
c. Ethyl isopropyl ketone | d. 2-Hexanone

Q.3 Which of the following will not form when calcium formate is distilled with calcium acetate

a. Acetone | b. Ethanal
c. Propanal | d. Methanal

Q.4 The reaction of formaldehyde with HCN is

a. Nucleophilic substitution | b. Electrophilic substitution
c. Free radical addition | d. Nucleophilic addition

Q.5 In aldehydes and ketones carbon of carbonyl group is

a. sp^3 hybridized | b. sp^2 hybridized
c. sp hybridized | d. unhybridized

Q.6 Which of the following gives positive haloform test and positive Fehling solution test

a. Acetone | b. Propanal
c. Acetaldehyde | d. Formaldehyde

Q.7 Crotonaldehyde is an α, β-unsaturated aldehyde formed from an aldol. The aldehyde which is the starting material in this reaction is

a. Ethanal | b. Propanone
c. Propanal | d. Propanol

Q.8 Which compound gives positive silver mirror test

a. Propanone | b. Propanol
c. Propanal | d. Propanoic acid

Q.9 An organic compound P when treated with $NaBH_4$ forms Q, which is used in denaturing of the spirit. The compound P is

a. Ethanol | b. Methanal
c. Methanol | d. Ethanal

Q.10 Which of the following will react with nitroprusside solution?

a. CH_3CH_2CHO | b. $(CH_3)_2CO$
c. CH_3COOH | d. $CH_3–CH_2–OH$

Q.11 Cannizzaro's reaction is not given by

a. HCHO | b. C_6H_5CHO
c. $(CH_3)_3C$-CHO | d. CH_3CHO

Q.12 Aldehydes are prepared by the oxidation of

a. Primary alcohols | b. Tertiary alcohols
c. Secondary alcohols | d. 2-Propanol

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Q.13 **$CH_3 - CO - CH_2 - CH_3 + [O] \rightarrow C + D$ in the given reaction, C and D are**

a. $CH_3COOH + CH_3COOH$
b. $CH_3COOH + CH_3CH_2CHO$
c. $CH_3COOH + CH_3CH_2COOH$
d. $HCHO + 2CH_3COOH$

Q.14 **Which compound forms white crystalline ppt with aldehydes and small methyl ketones**

a. 2,4 DNPH
b. Ammonical $AgNO_3$
c. Sodium nitroprusside
d. $NaHSO_3$

Q.15 **Alcohols react with aldehydes in presence of dry HCl to give**

a. Esters
b. Carboxylic acid
c. Acetals
d. Glyoxal

Q.16 **Which of the following does not give yellow precipitate with I_2 + NaOH**

a. Acetone
b. Benzaldehyde
c. Acetaldehyde
d. Acetophenone

Q.17 **Which of the following does not give brick red precipitate with Fehling's solution**

a. Acetaldehyde
b. Formalin
c. D-glucose
d. Acetone

Q.18 **Which is most difficult to oxidize**

a. HCHO
b. CH_3COCH_3
c. CH_3CHO
d. CH_3CH_2CHO

Q.19 **Which of the following gives silver mirror with ammonical $AgNO_3$**

a. Benzyl alcohol
b. Benzene
c. Benzoic acid
d. Benzaldehyde

Q.20 **Which reagent will perform the following reduction**

$$CH_3 - CH = CH - CHO \longrightarrow CH_3 - CH = CH - CH_2 - OH$$

a. V_2O_5
b. $NaBH_4$
c. H_2/Ni
d. Both "b" and "c"

Q.21 **Which one of the following does not give aldol condensation reaction**

a. Ethanal
b. Propanal
c. Propanone
d. Methanal

Q.22 **An aldehyde when strongly heated with Fehling's reagent gives brick red precipitate of**

a. CuO
b. Cu_2O
c. CuO_2
d. $Cu(OH)_2$

Q.23 **Propanone reacts with HCN in basic medium followed by acid hydrolysis yielding**

a. 2-Hydroxy propanoic acid
b. 2-Hydroxy ethanoic acid
c. 2-Hydroxy-2-methyl propanoic acid
d. 2-Hydroxy butanoic acid

Q.24 **The reagent (s) used to distinguish between ethanal and formaldehyde**

a. Phenylhydrazine
b. Alkaline aqueous iodine
c. $NaHSO_3$
d. Tollen's reagent

Q.25 **Sodium borohydride reduces the ________ bond**

a. C = C
b. C ≡ C
c. C ≡ N
d. C = O

Q.26 **Statement NOT true about reduction of acetone**

a. With $NaBH_4$ it follows nucleophilic addition
b. With $LiAlH_4$ it gives propane
c. It gives to 2-propanol with $NaBH_4$
d. Can easily be reduced with $LiAlH_4$

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Q.27 Hydrogen cyanide adds to aldehyde and ketones to form cyanohydrin the reaction is carried out by adding slowly a mineral acid to an aqueous solution of sodium cyanide. The acid generates HCN from sodium cyanide in situ which means

a. Before reaction
b. During reaction
c. After reaction
d. At any time

Q.28 $X \xrightarrow[H_2SO_4]{K_2Cr_2O_7} CH_3COCH_3 \xrightarrow[I_2/NaOH]{warm} CHI_3$ **, identify compound "X"**

a. $CH_3CH_2CH_2OH$
b. $CH_3-\underset{}{\overset{\displaystyle OH}{\overset{|}{C}}}H-CH_3$
c. $CH_3OCH_2CH_3$
d. CH_3CH_2OH

Q.29 Which of the following is easily oxidized to the corresponding carbonyl compound

a. Propanone
b. 2–Hydroxypropane
c. 2–Methyl – 2 – hydroxypropane
d. t–Butyl alcohol

Q.30 The complex formed in Tollen's reagent is

a. $[Ag(NH_3)_2]OH$
b. $[Ag(NH_3)_2]$
c. $[Ag(OH)_2]NO_3$
d. $[Ag(NH_3)_2OH]NO_3$

Q.31 The correct name of the following given compound is

$$C_6H_5-\overset{\displaystyle O}{\overset{\|}{C}}-CH_3$$

a. Methyl Phenyl Ketone
b. Benzophenone
c. Acetophenone
d. Both a and c

Q.32 Acetone reacts with $NaHSO_3$ to form bisulphite adduct. This is an example of

a. Electrophilic substitution reaction
b. Electrophilic addition reaction
c. Nucleophilic substitution reaction
d. Nucleophilic addition reaction

Q.33 One of the following is identification test of carbonyl compounds

a. Lucas test
b. Friedal – Craft Alkylation
c. 2,4 – DNPH
d. Baeyer's reagent test

Q.34 Homologous series of both aldehyde and ketones have the general formula

a. C_nH_{2n}
b. $C_nH_{2n}O_2$
c. $C_nH_{2n+2}O$
d. $C_nH_{2n}O$

Q.35 The nucleophile produced during reduction of carbonyl compound with sodium borohydride is

a. BH_4^-
b. H^-
c. BH_3^-
d. BH_2^-

Q.36 Acetaldehyde polymerizes in the presence of dilute H_2SO_4 to give ___________.

a. Metaformaldehyde
b. Bakelite
c. Paraldehyde
d. Crotonaldehyde

Q.37 A student mixed ethyl alcohol with small amount of sodium dichromate and added it to the hot solution of dilute sulphuric acid. A vigorous reaction took place. He distilled the product formed immediately. What was the product

a. Acetone
b. Dimethyl ether
c. acetaldehyde
d. Acetic acid

Q.38 Which of the following acts as a nucleophile in given reaction?

$$CH_3-CHO + HCN \longrightarrow H_3C-\overset{\displaystyle OH}{\overset{|}{C}}H-CN$$

a. Cl^-
b. CN^-
c. OH^-
d. HCl

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Q.39 Common names of aldehydes are derived from?

a. Alkanes
b. Alcohols
c. Ethers
d. Carboxylic acids

Q.40 The other name of α-Hydroxy butyaraldehyde is

a. 2-Hydroxy butanal
b. 3-Hydroxybutanal
c. 4-Hydroxy butanal
d. 2-Hdyroxy pentanal

Q.41 When this group "–C = N – R" is attached to carbon the resultant product is called

a. Hydrazone
b. Acetal
c. Oxime
d. Imine

Q.42 Methyl ketones are usually characterized by

a. Tollen's tests
b. Lucas test
c. Iodoform test
d. Fehling solution test

Q.43 Which pair of compounds cannot be distinguished by means of Tollen's test

a. HCHO and CH_3COCH_3
b. HCHO and CH_3CHO
c. CH_3CHO and CH_3COCH_3
d. $C_6H_5COCH_3$ and C_6H_5CHO

Q.44 Which of the following statements is incorrect about ethanal and propanone

a. Both can be prepared by oxidation of alcohols
b. Both gives wine red or orange colour with sodium nitroprusside
c. Both react with 2, 4-Dinitrophenyl hydrazine reagent
d. Both give positive iodoform test

Q.45 In an acid catalyzed reaction of carbonyl compounds, the acid increases________

a. Nucleophilic character of C of carbonyl group
b. Acidic character of carbonyl group
c. Electrophilic character of C of carbonyl group
d. Both acidic and nucleophilic character

Q.46 Which of the following reagents will react with both aldehyde and ketones

a. Grignard's reagent
b. Tollen's reagent
c. Fehling's reagent
d. Benedict's reagent

Q.47 In aldehyde the carbonyl group must be bonded to

a. Two carbon atoms
b. At least one hydrogen atom
c. One carbon atom
d. One hydrogen and one carbon atom

Q.48 During nucleophilic addition reaction of aldehydes and ketones the bond angle around the carbonyl carbon changes

a. 109.5° – 120°
b. 120° – 180°
c. 120° – 109.5°
d. 109.5° – 180°

Q.49 Which one of the following compound form oxime when reacted with aldehydes or ketones?

a. NH_3
b. CH_3NH_2
c. NH_2NH_2
d. NH_2OH

Q.50 A compound "X" gives silver mirror test. It gives primary alcohol on reduction. The compound "X" belongs to class of organic compounds

a. Alcohol
b. Aldehyde
c. Carboxylic acid
d. Ketone

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CTS-10 CHEM,PHY

Chemistry

1- B	11- D	21- D	31- D	41- D
2- C	12- A	22- B	32- D	42- C
3- C	13- A	23- C	33 C	43- B
4- D	14- D	24- B	34- D	44 B
5- B	15- C	25- D	35- B	45- C
6- C	16- B	26 B	36- C	46- A
7- A	17- D	27- B	37- C	47- B
8- C	18- B	28- B	38 B	48- C
9- C	19- D	29- B	39 D	49- D
10- B	20- B	30 A	40 A	50- B

Physics

1- C	11- B	21- D	31- D	41 B
2- B	12- D	22- A	32 C	42 C
3- D	13- B	23- B	33 D	43 C
4- D	14- A	24- C	34 C	44- D
5- B	15- B	25- A	35- C	45 A
6- C	16- B	26- B	36 B	46 C
7- C	17- B	27 C	37- B	47 D
8- A	18- A	28- B	38 C	48- D
9- B	19- B	29- C	39- B	49 B
10 A	20- B	30 D	40- B	50- A

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